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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,408	09/16/2003	Takahiro Matsumoto	03560.003354.	1686
5514	7590	01/12/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			LAU, TUNG S	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2863

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/662,408	MATSUMOTO ET AL.	
	Examiner	Art Unit	
	Tung S Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendments to the specification on 12-14-2004 were accepted by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakubo (U.S. Patent 5,760,411).

Regarding claim 9:

Kawakubo discloses a position detection method of detecting a position of a mark, said method comprising steps of: detecting light from the mark under a first detecting condition to obtain a position of the mark as a first position (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); detecting light from the mark under a second detecting condition different from the first detecting condition to obtain a position of the mark as a second position (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); obtaining offset data for offsetting one of the first and second positions based on previously prepared information for relating the first and second positions to the offset data (Col. 8-9, Lines 57-44); and detecting a position of the mark based on the offset data and one of the first and second positions (Col. 8-9, Lines 57-44).

Regarding claim 16:

Kawakubo discloses an exposure apparatus for transferring a pattern to a workpiece, said apparatus comprising: means for detecting light from a mark on the workpiece under a first detecting condition to obtain a position of the mark as a first position (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); means for detecting light from the mark under a second detecting condition different from the first detecting condition to obtain a position of the mark as a second position (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46), means for obtaining offset data for offsetting one of the first and second positions based on previously prepared information for relating the first and second positions to the offset data (Col. 8-9, Lines 57-44); means for detecting a position of the mark based on the offset data and one of the first and second positions (Col. 8-9, Lines 57-44); and means for aligning the workpiece based on the position of the mark detected by said position detecting means (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46, abstract).

Regarding claim 10, Kawakubo discloses detecting conditions differ from each other in focus state of an image of the mark (fig. 2, unit PL, fig. 2, fig. 3);

Regarding claim 11, Kawakubo discloses detecting conditions differ from each other in a coherence factor of an illumination optical system for illuminating the mark (fig. 2, 3); Regarding claim 12, Kawakubo discloses different condition differ in numerical aperture (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); Regarding claim 13, Kawakubo discloses different condition differ in polarization and wavelength (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); Regarding claim 14, Kawakubo discloses previously prepared information relates a difference between the first

and second positions to the offset data (Col. 8-9, Lines 57-44); Regarding claim 15, Kawakubo discloses previously prepared information is a coefficient multiplied to the difference, and one of the first and second position is offset by a product of the coefficient and the difference to detect the position of the mark (Col. 8-9, Lines 57-44); Regarding claim 17, Kawakubo discloses developing the workpiece to which the pattern has been transferred (Col. 8-9, Lines 57-44, fig. 2, 3).

Response to Arguments

3. Applicant's arguments filed 12/14/2004 have been fully considered but they are not persuasive.

A. Applicant argues in the arguments that the prior art does not show the 'offset data for offsetting one of a first mark position detected under a first light detecting condition and a second mark position detected under a second light detecting condition is obtained based on previously prepared information relating the first and second positions to the offset data and another feature that the mark position is detected based on the offset data and one of the first and second positions'.

Kawakubo discloses 'offset data for offsetting one of a first mark position detected under a first light detecting condition and a second mark position detected under a second light detecting condition is obtained based on previously prepared information relating the first and second positions to the offset data and another feature that the mark position is detected based on the

Art Unit: 2863

offset data and one of the first and second positions' in Col. 8-9, Lines 57-44, fig. 2, 3.

B. Applicant continues to argue in the arguments that the prior art does not show the detail in claims 10 –15 and 17. Regarding claim 10, Kawakubo discloses detecting conditions differ from each other in focus state of an image of the mark (fig. 2, unit PL, fig. 2, fig. 3); Regarding claim 11, Kawakubo discloses detecting conditions differ from each other in a coherence factor of an illumination optical system for illuminating the mark (fig. 2, 3); Regarding claim 12, Kawakubo discloses different condition differ in numerical aperture (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); Regarding claim 13, Kawakubo discloses different condition differ in polarization and wavelength (Col. 1-2, Lines 46-40, Col. 7, Lines 8-46); Regarding claim 14, Kawakubo discloses previously prepared information relates a difference between the first and second positions to the offset data (Col. 8-9, Lines 57-44); Regarding claim 15, Kawakubo discloses previously prepared information is a coefficient multiplied to the difference, and one of the first and second position is offset by a product of the coefficient and the difference to detect the position of the mark (Col. 8-9, Lines 57-44); Regarding claim 17, Kawakubo discloses developing the workpiece to which the pattern has been transferred (Col. 8-9, Lines 57-44, fig. 2, 3).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL


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